

Figure 1

A. Rig open reading frame nucleotide sequence

B. Rig amino acid sequence

MPEQSNNDYRVVVFAGGGVGKSSLVLRFVKGTFRDTYIPTIEDTYRQVISCD
KSVCTLQITDTGSHQFPAMQRLSISKGHAFILVFSVTSKQSLEELGPIYKLIV
QIKGSVEDIPVMLVGNKCDETOREVDTREAQAVAQEWKCAFMEETSAKMNN
YNVKELFQELLTLETRRNMSLNIDGKRSGKQKRTDRVKGKCTLMM

Figure 2

Rig	mpeqsnndyrvvvf-----	13
Noey2	mgnasfgskeqkllkrlrlpallilrafkphrkirdyrvvvv-----	43
RalA	maankpkqgqnsalalhkvimv-----	20
Rap1A	mreyklvv-----	9
Rap2A	mreykvvv-----	9
HRas	mteyklvvv-----	9
RRas	mssgaasgtgrgrprrgggpgpgdpppsethklvvv-----	35
Rheb	mpqsksrkial-----	12
Rig	GAGGVVGKSSlvlrfvkgtfrdtYIPTIEDTYrqviscdksvctl	57
Noey2	GTAGVKGSTl1hkwasgnfrheYLPTIENTYcqllgcshgv1sl	87
RalA	GSGGVGKSAltlqfmydefvedYEPTKADSYrkvvldgeevqi	64
Rap1A	GSGGVGKSAltvqfvqgqfvekYDPTIEDSYrkqvevdccqcm1	53
Rap2A	GSGGVGKSAltvqfvgtfiekYDPTIEDFYrkeievvdsspsv1	53
HRas	GAGGVGKSAltiqliqnhfvdeYDPTIEDSYrkqvvidgetc11	53
RRas	GGGGVGKSAltiqfiqsyfvsdYDPTIEDSYtkicsvdgiparl	79
Rheb	GYRSVGKSSltiqfqvegqfvdsYDPTIENTFklitvngqeyhl	56
Rig	qitDTTGSHQfpamqr1siskghafilvfvtskqsllelgpiy-----	101
Noey2	hitDSKSGDGnralqrhviarghafvlvysvtkhetleelkafy-----	131
RalA	dildTAGQEDyaairdnyfrsgegflcvfsitemesfaatadfr-----	108
Rap1A	eildTAGTEQftamrdlymkngqgqfalgysitaqstfndlqdlr-----	97
Rap2A	eildTAGTEQfasmrldlyikngqgqfalgyslvnqqsfqdikpmr-----	97
HRas	dildTAGQEEysamrdqymrtgegflcvfainntksfedihqyr-----	97
RRas	dildTAGQEEfgamreqymraghgfllvfaindrqsfnevqklf-----	123
Rheb	qlvDTAGQDEysifpqtsidingyilvysvtsiksfevikvih-----	100
Rig	klivqikgsvedipvm1vg-----	138
Noey2	elickikgnlnlhkfp1vlg-----	169
RalA	eqilrvkedenvpf11vg-----	144
Rap1A	eqilrvkdtedvpmlvg-----	133
Rap2A	dqiirvkryekvp1vlg-----	133
HRas	eqikrvkdssdvpmlvg-----	133
RRas	tqilrvkdrddfpv1vlg-----	159
Rheb	gk1ldmvgkvqip1vlg-----	136
Rig	aqewkcaf--- ETSA kmnnynvkelfqelltletrrnmslnidg-----	179
Noey2	amewncaf--- EIS Aktdvnvqelfhmllykkp1qpe-----	210
RalA	raeqwnvnyy--- ETSA ktranvdkvffd1mreirarkmedskek-----	186
Rap1A	larqwcncaf1--- ESS Akskinvneifydlvrqinrktpvekkp-----	176
Rap2A	laeewgcpfm--- ETSA ksktmvdelfaiev1vrqmnyaaqpdkddp-----	175
HRas	arsy1ipyi--- ETSA ktrgvedafyt1vreibhklrkl1npp-----	174
RRas	fgashhvayf--- EAS Ak1rlnvdeafeqlvra1rkyqeqelpps-----	201
Rheb	laeswnaafl--- ESS Akenqtavdvfrriileakmdgaasqgk-----	178
Rig	krsgkqkrtdrvkgk-----//----CTLM	198
Noey2	kkksqmpnttek11dk-----//----CIIM	229
RalA	ngkkkrkslakrirer-----//----CCIL	206
Rap1A	kkks-----//----CLLL	184
Rap2A	ccsa-----//----CNIO	183
HRas	desgpgcmsck-----//----CVLS	189
RRas	ppsaprkkggcp-----//----CVLL	218
Rheb	ss-----//----CSV	184

Figure 3

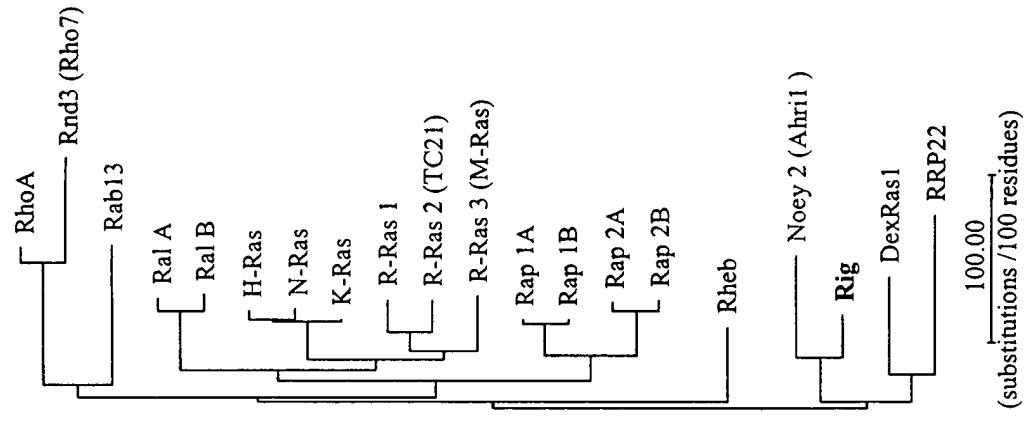


Figure 4

(A)

brain
heart
liver
spleen
thymus
colon
sk mns
heart
kidney
sm int
placentta
lung
pbl

(B)



(C)

	1	2	3	4	5	6	7	8	9	10	11	12
A	whole brain	cerebellum, left	substantia nigra	brain	esophagus	colon, transverse	kidney	tung	liver	testis, NL-60	fetal brain	yeast tRNA
B	cerebral cortex	cerebellum, right	caudate, accumbens	area	stomach	colon, descending	stomach	muscle	placenta	pancreas	HeLa	adult heart tRNA
C	trigeminal lobe	corpus callosum	thalamus	atrium, left	duodenum	rectum	spleen	bladder	adrenal gland	testis, K-562	fetal kidney	E. coli tRNA
D	parietal lobe	ampulla	pituitary gland	stomach, right	jejunum	thymus	uterus	thyroid gland	leukemia	testis, MULT-4	fetal liver	E. coli DNA
E	occipital lobe	caudate nucleus	spinal cord	ventricle, left	liver	peripheral blood leukocyte	prostate	salivary gland	lymphoma, Burkitt's	testis, spleen	adult perNA	
F	temporal lobe	hippocampus		ventricle, right	ileocecum	lymph node	testis	lymphoma, Burkitt's	lymphoma, Burkitt's	testis, spleen	adult DNA	
G	P.G. of cerebral cortex	medulla oblongata		inter-ventricular septum	appendix	bone marrow	ovary		colorectal adenocarcinoma, SIV680	testis, liver	adult DNA 100 ng	human DNA 500 ng
H	pons	putamen		spex of the heart	colon, ascending	trachea			lung	carcroma, A549		

*paracentral gyrus

Figure 5

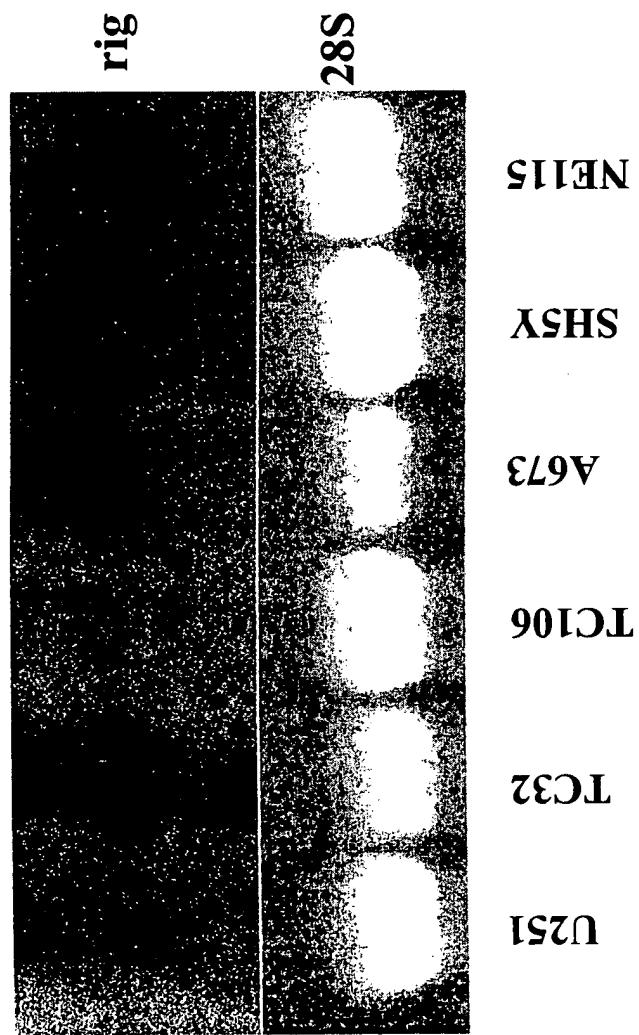


Figure 6

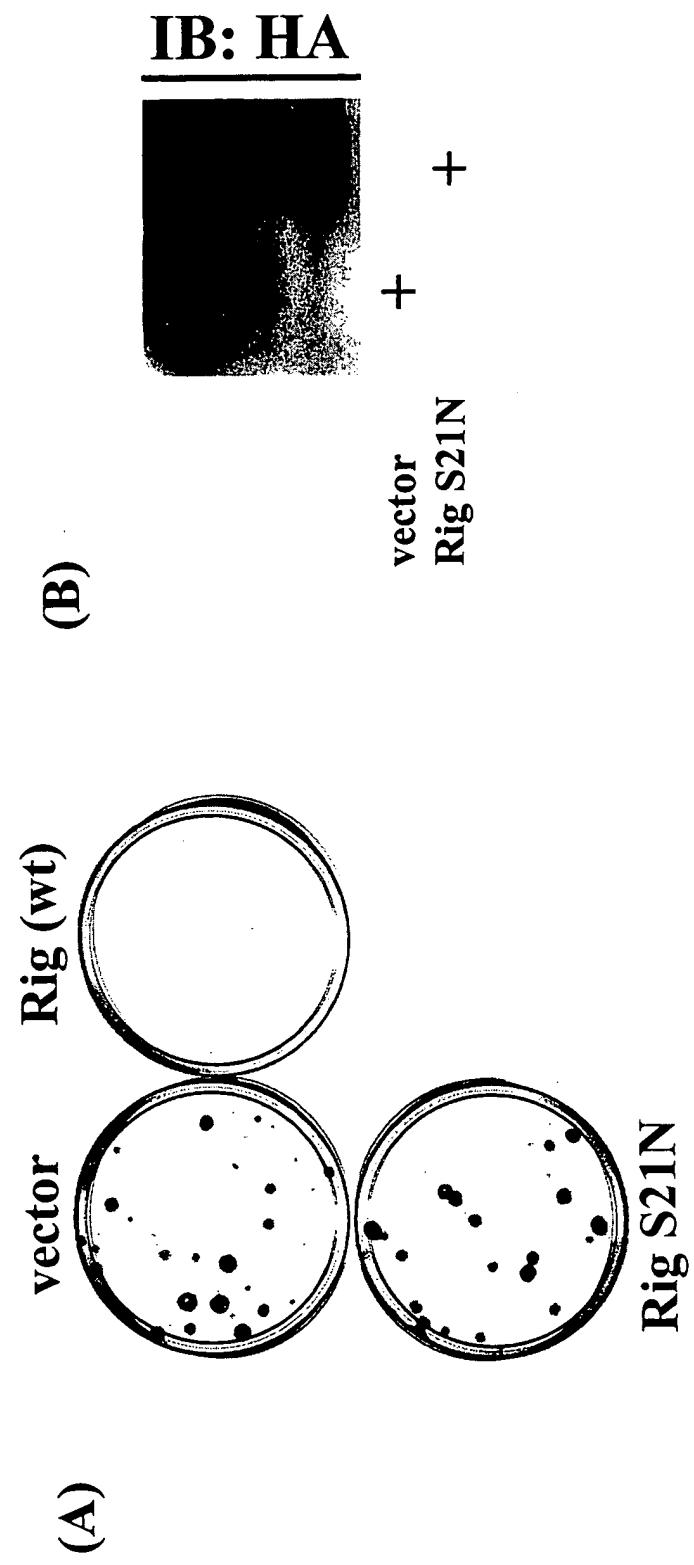


Figure 7

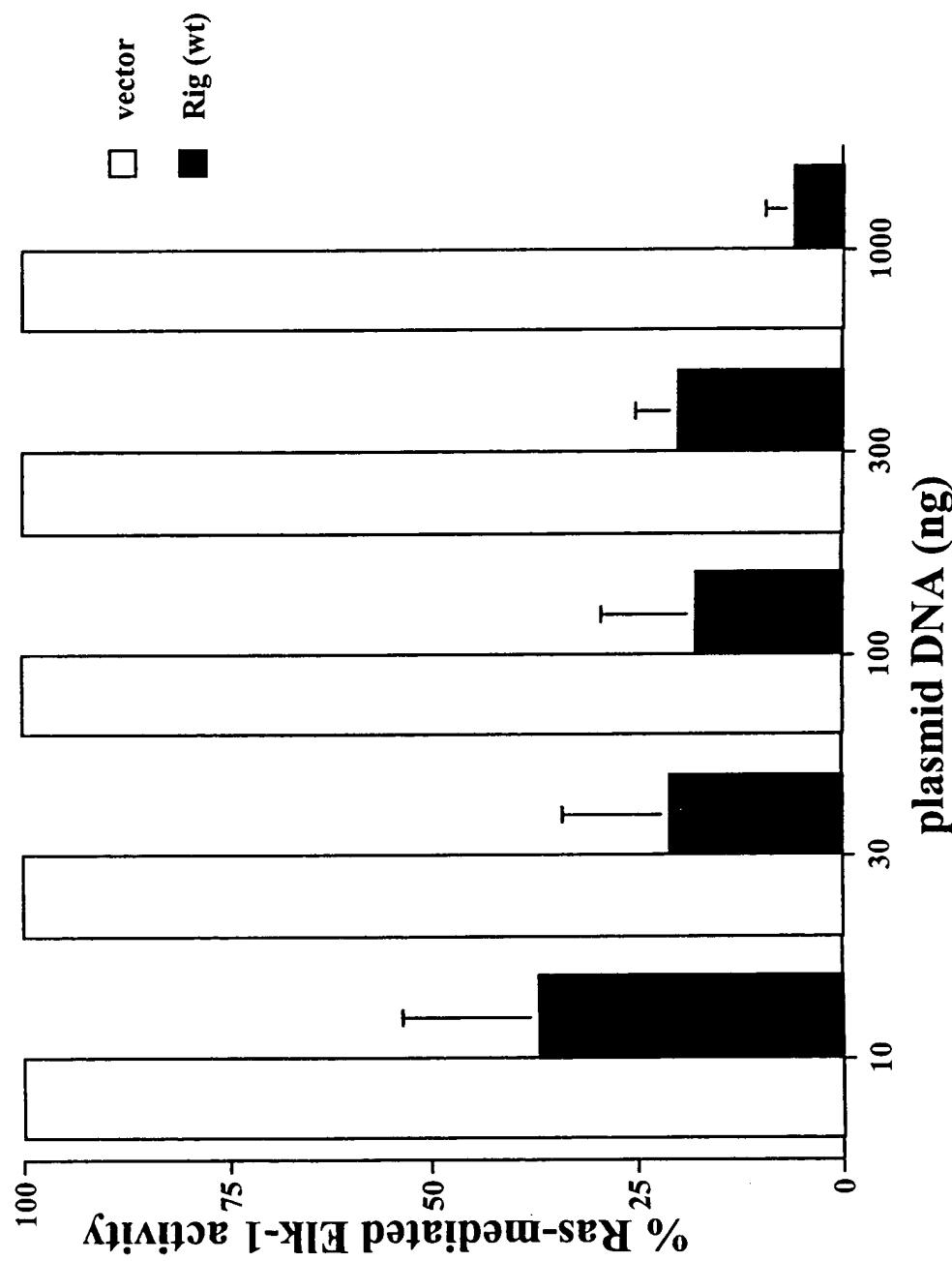


Figure 8

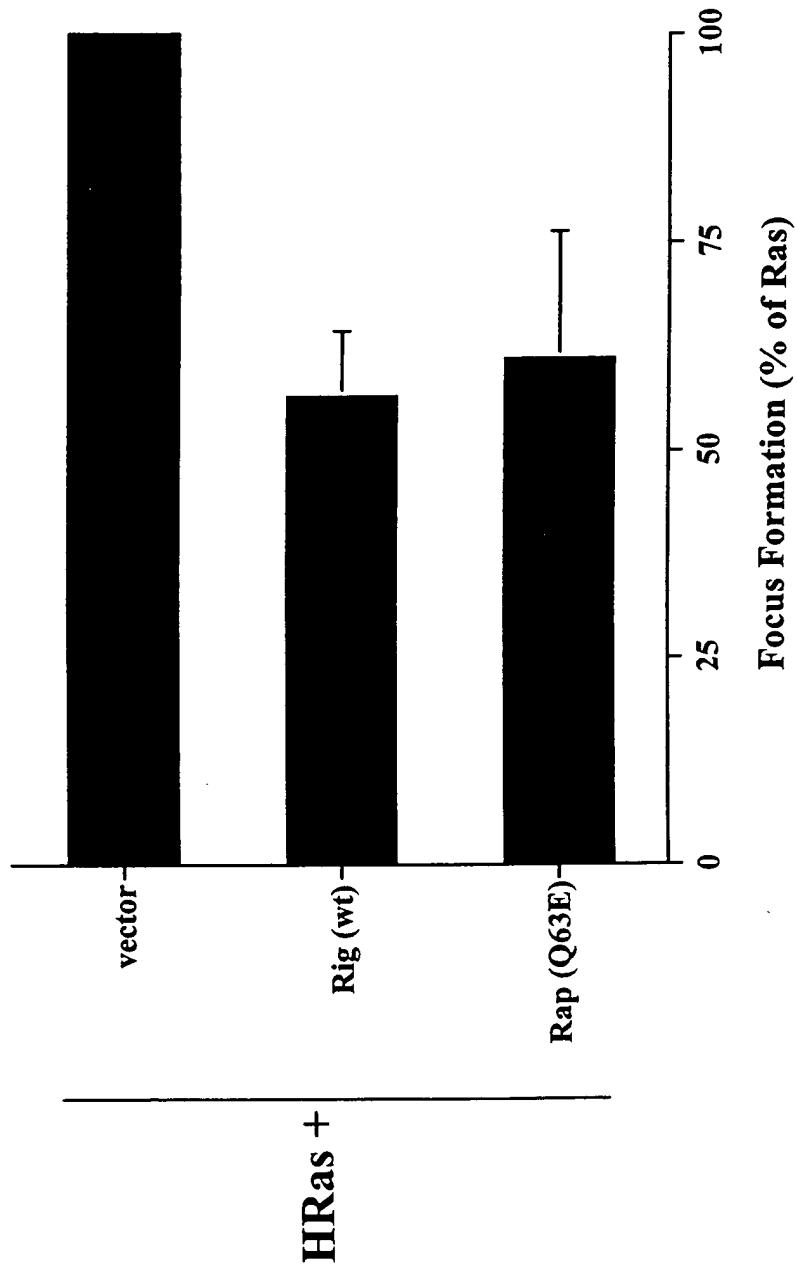


Figure 9

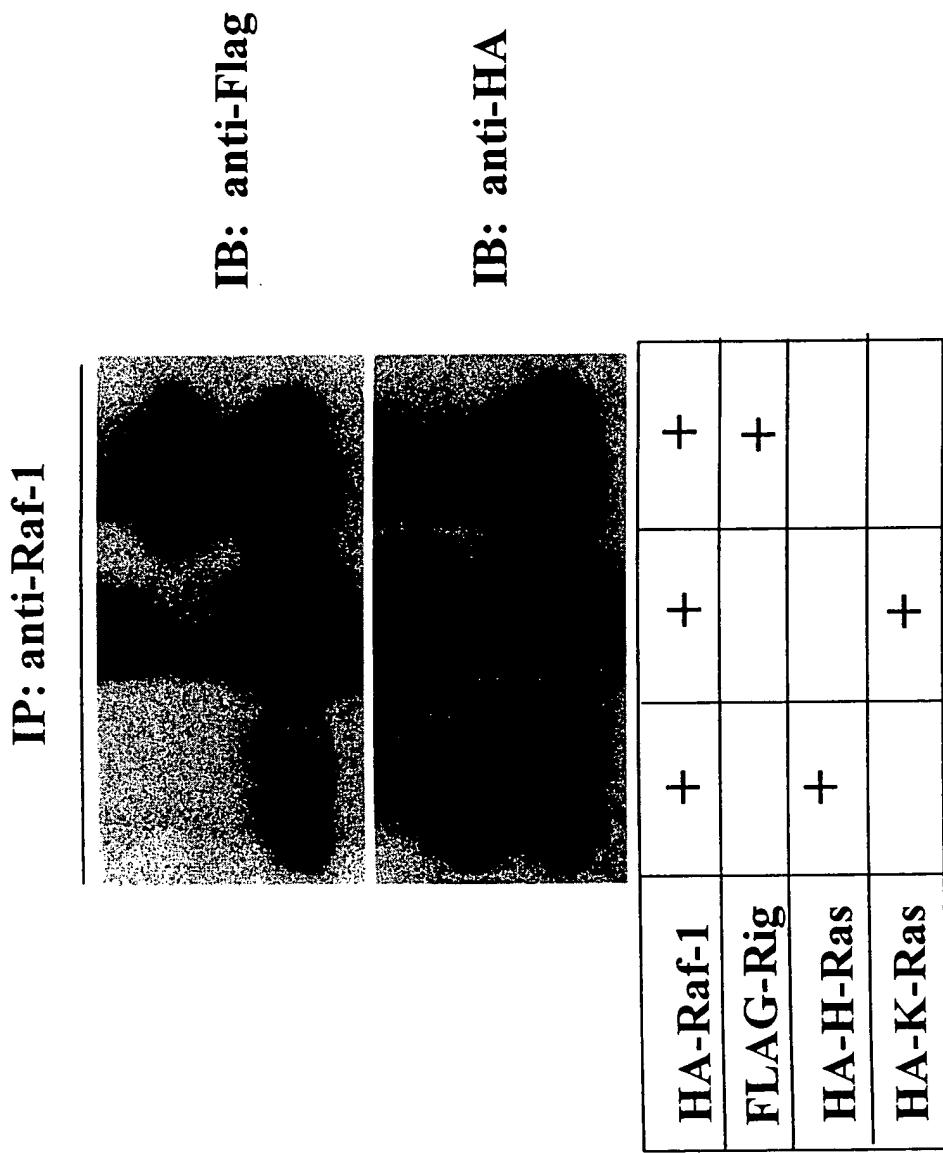


Figure 10

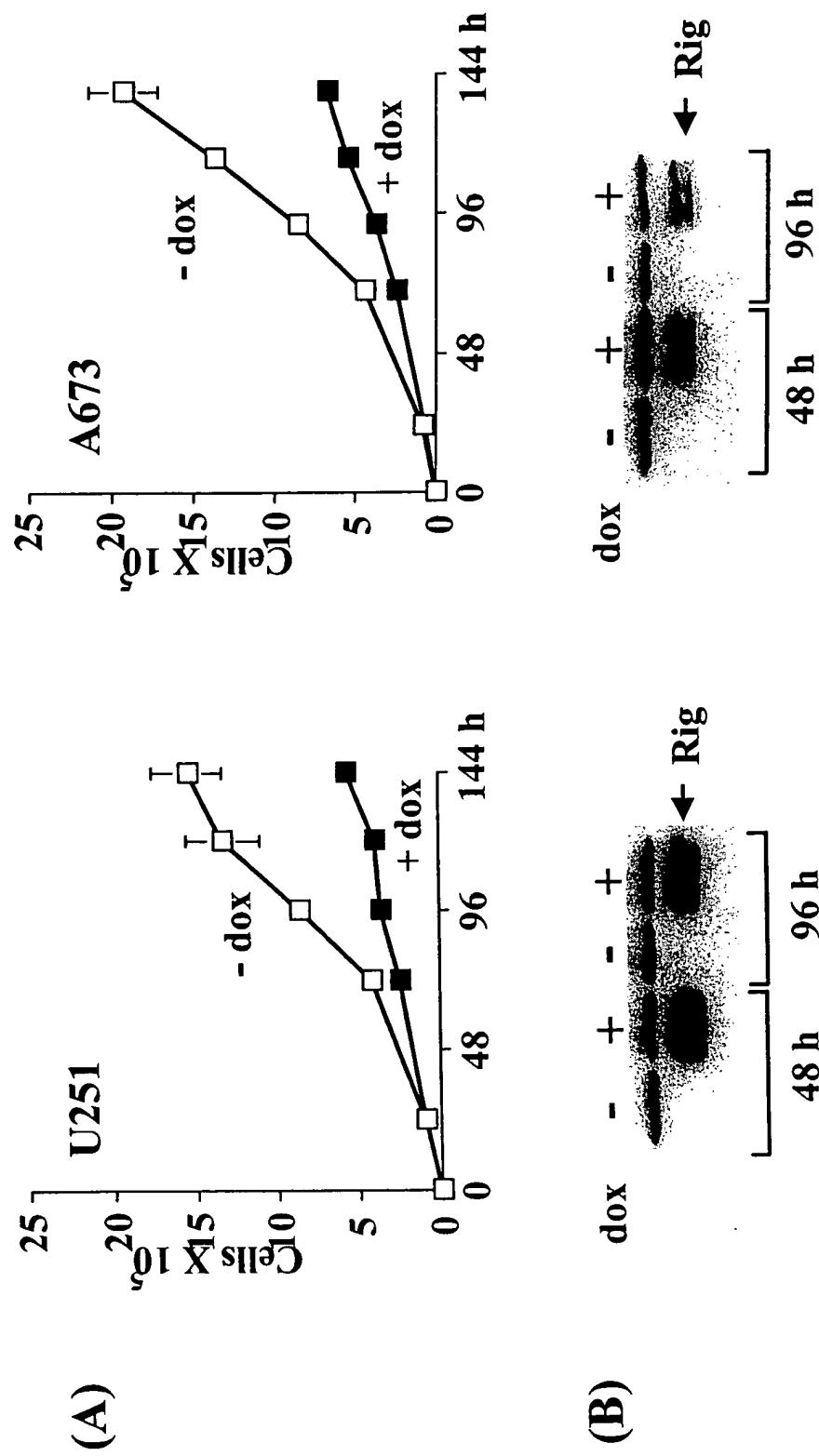


Figure 11

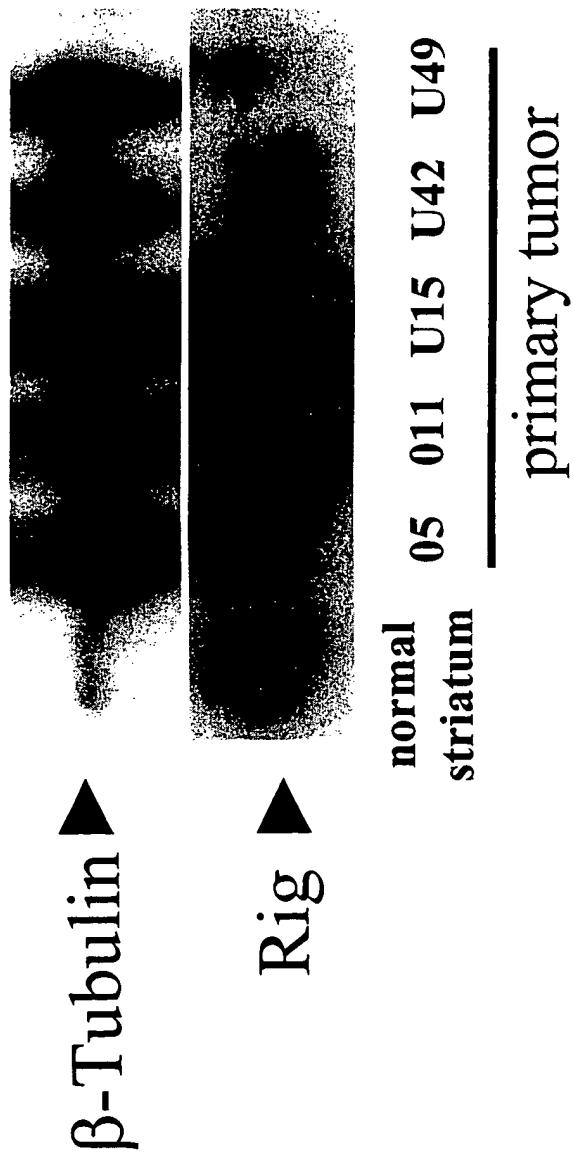


Figure 12

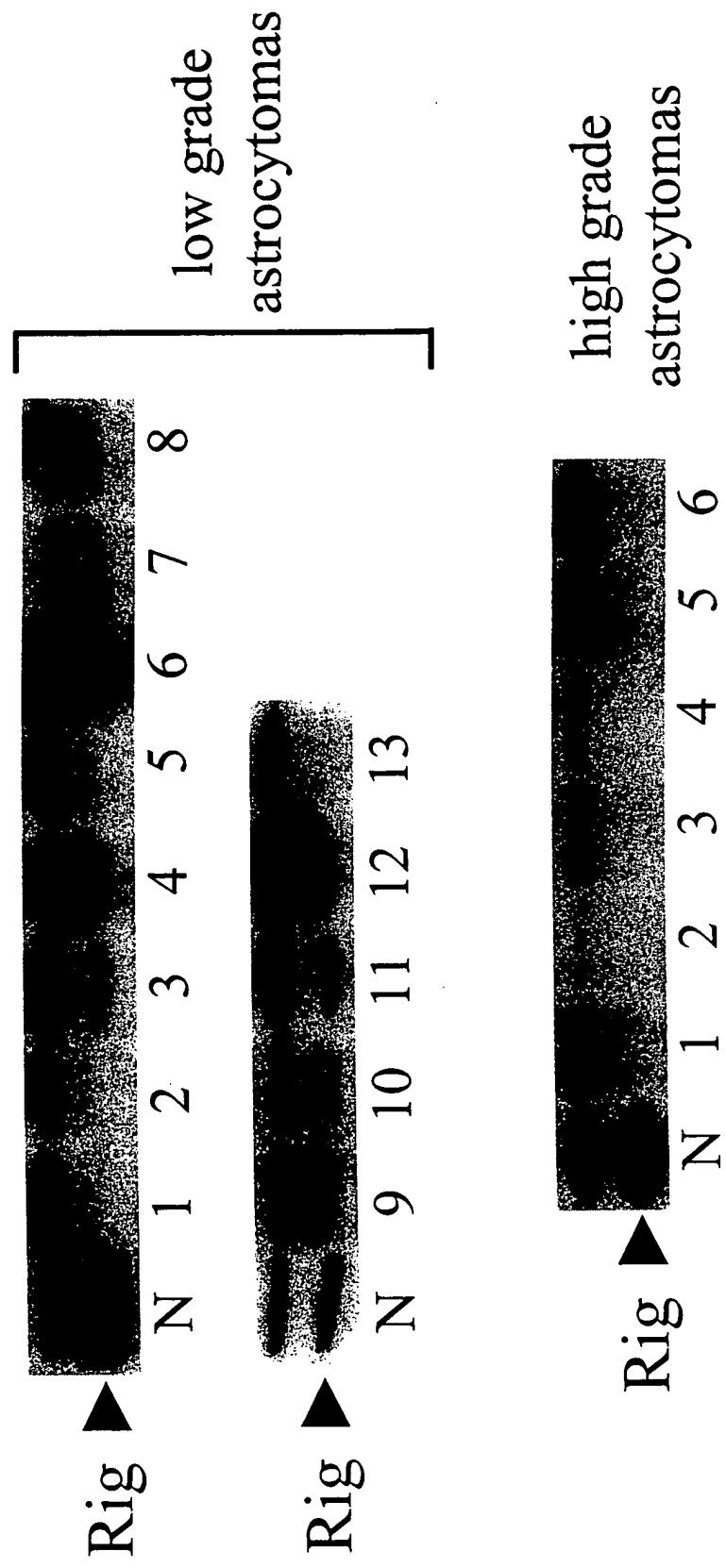


Figure 13

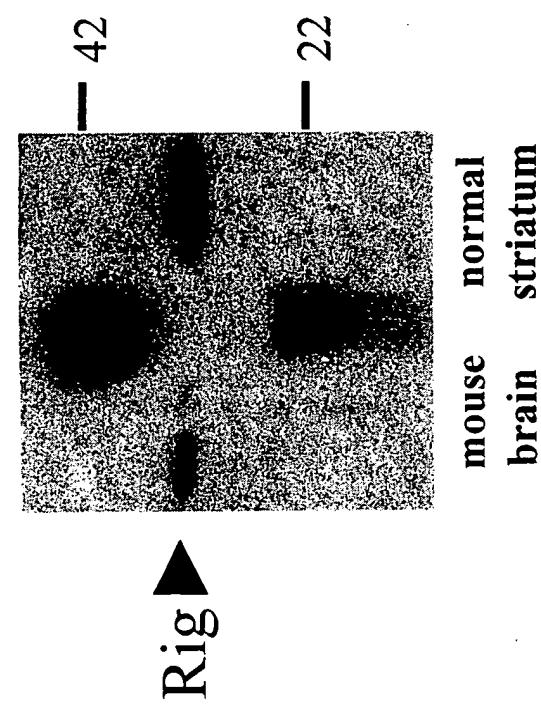


Figure 14

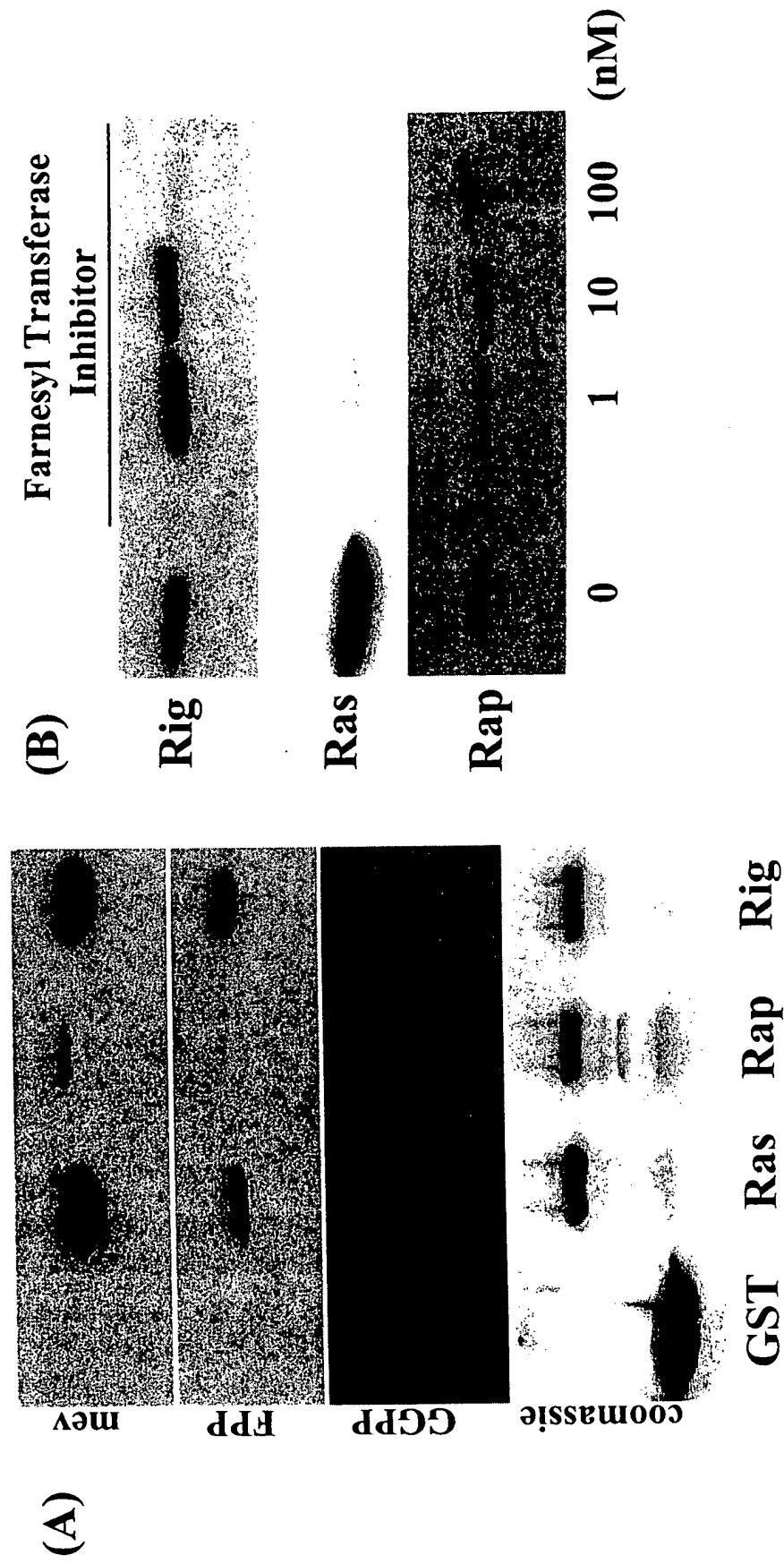


Figure 15

